

California Environmental
Protection AgencyDepartment of
Pesticide RegulationDecember
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Fact Sheet

Dormant Sprays & Water Quality

What is the problem with dormant sprays?

Winter surveys conducted by the Department of Pesticide Regulation (DPR), the Regional Water Quality Control Board, and the U.S. Geological Survey frequently found dormant spray residues in the San Joaquin River watershed. Some dormant spray levels were high enough to cause aquatic toxicity. State and federal laws prohibit discharge of substances that make our rivers toxic, even if the toxicity is limited to seemingly insignificant creatures. Small animals and plants comprise the foundation of healthy river and delta ecosystems. DPR may need to impose restrictions on the use of dormant sprays if aquatic toxicity persists. Consequently, DPR established the Dormant Spray Water Quality Program.

What is the Dormant Spray Water Quality Program?

Through the Dormant Spray Water Quality Program, DPR seeks to prevent aquatic toxicity from organophosphate pesticide residues (diazinon, chlorpyrifos [Lorsban] and methidathion [Supracide]) in the Sacramento and San Joaquin Rivers. The initial effort focuses on promoting voluntary efforts to prevent aquatic toxicity. Concurrently, monitoring data gathered by DPR will verify compliance with water quality standards. DPR hopes that preventive actions taken by growers will prevent aquatic toxicity and forego the need to impose restrictions.

Why are dormant sprays targeted?

Growers use large volumes of dormant sprays on fruit and nut trees in the San Joaquin River watershed. Studies showed pesticide levels in those rivers peak during and shortly after winter storms, suggesting runoff as an important source of pesticide contamination. Subsequently, DPR conducted studies confirming that these pesticides run off orchards in toxic amounts.

What about other sources?

In urbanized areas, chlorpyrifos and diazinon can get into rivers through storm drains and sewage outfalls. DPR and the regional water quality boards are currently evaluating the impact of chlorpyrifos and diazinon from urban sources as well.

What approach is DPR taking?

DPR's approach to addressing the issue of dormant sprays water quality impact marks a departure from traditional "command and control" regulatory programs. Rather than immediately move to restrictive mandatory restrictions on the use of dormant sprays, DPR will instead rely on growers to adopt voluntary practices to

reduce the movement of these pesticides to surface waters. The steps growers adopt will be their decision. They should focus on orchards next to streams and water bodies. Risk reduction measures can include avoiding mixing and loading near streams, reducing rates of application, shutting off spray rigs at the end of rows near streams, and using alternative pesticide products.

DPR will evaluate the success of the voluntary efforts toward achieving water quality compliance using standard toxicity tests. DPR may impose regulatory measures at any time, depending on assessment of the monitoring results. As long as progress continues toward compliance with the water quality standard, regulations will be unnecessary.

A thorough evaluation of the Dormant Spray Water Quality Program will occur in five years. If in five years, aquatic toxicity persists from dormant sprays, DPR will impose regulatory controls to lower dormant spray residues to acceptable levels. DPR will distribute monitoring results and its evaluation of the Dormant Spray Water Quality Program early next summer and hold workshops to discuss the results and next steps.

What can be done?

Adjustments to mixing and loading practices, application techniques, orchard floor management, and other integrated pest management practices can reduce the impact of dormant sprays. Many organizations can provide growers with information on pest management practices that reduce the risk to water quality, including techniques that keep pesticides from washing into rivers and streams. DPR will provide you with a list of organizations you can contact. For more information and to be put on the Dormant Spray Water Quality Program mailing list please contact Marshall Lee at DPR, (916) 324-4269, or via e-mail (mlee@cdpr.ca.gov).

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